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Utilizing 5S to Enhance Patient Care and Maximize Cost Avoidance

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Learning Objectives

- Outline the 5S method by optimizing PAR levels to reduce stockouts and calls to Central Supply.
- Discuss nurse-friendly supply categories to reduce time searching for supplies.

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Why 5S? Understanding the Problem

Workflow Disruptions

Clinicians frequently experienced workflow disruptions due to disorganized supply rooms, making it difficult to locate essential items quickly.

Goal: Increase clinician satisfaction by grouping functionally similar items together for ease of use

Stockouts & Call Downs

Supply rooms commonly experienced stockouts, leading to a high volume of call downs to Central Supply for urgent items. This reactive approach disrupted both clinical and supply chain workflows.

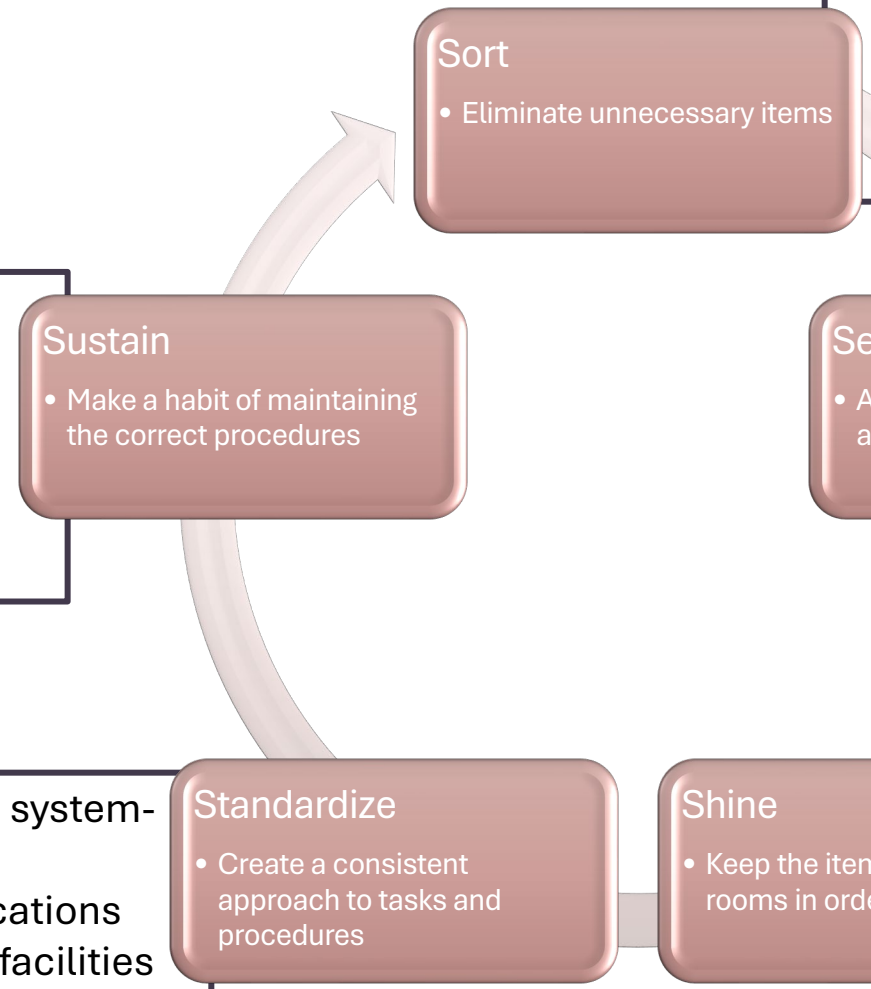
Goal: Decrease call downs to central supply by minimizing stockouts

Delays in Supply Delivery

A time study revealed that each requested supply delivery from Central Supply to the unit took an average of 45 minutes, leading to delays in patient care.

Goal: Reduce the time spent searching for supplies, allowing clinicians to reallocate their efforts toward direct patient care

5S Methodology Overview



- ✓ Review Par Optimization file
- ✓ Meet with unit project champions for adds & removals

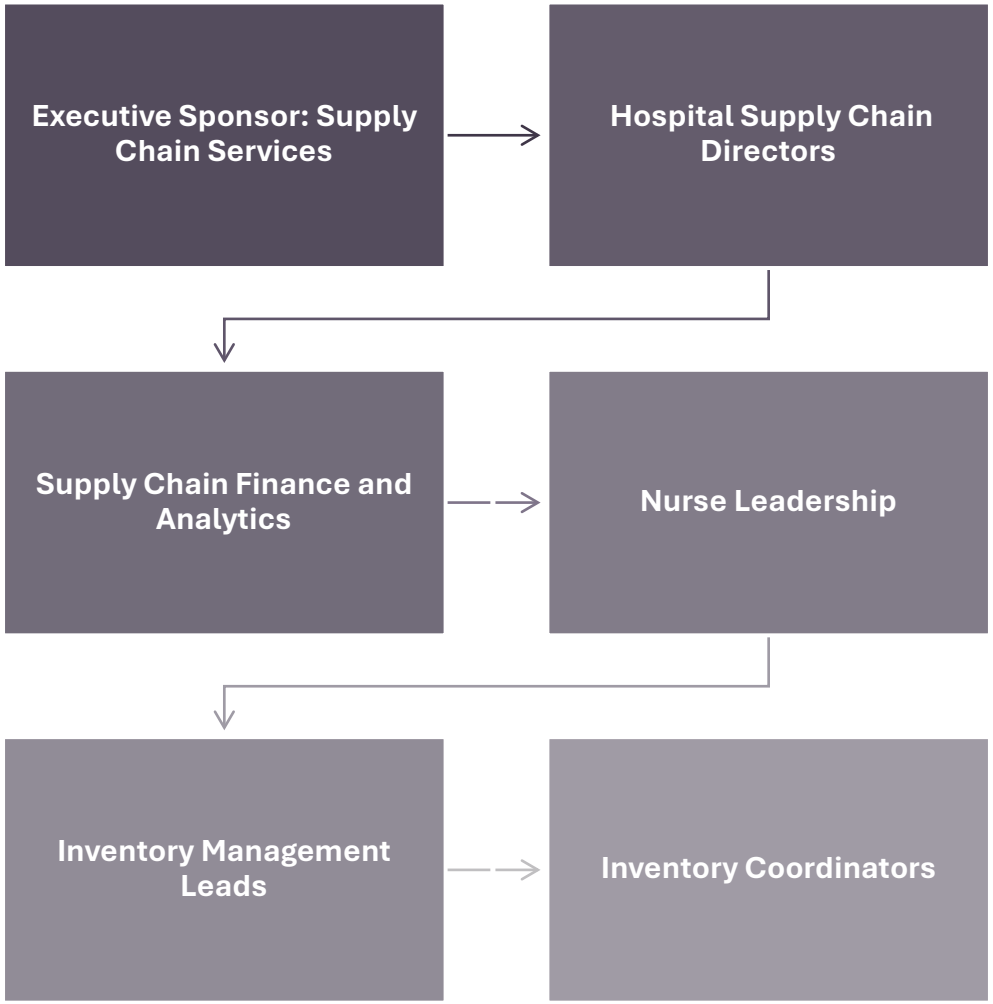
- ✓ Organize supplies by nurse-friendly categories
- ✓ Implement color-coded labels

- ✓ Re-arrange bins based on recommended par levels
- ✓ Ensure layouts supports workflow efficiency

- ✓ Assigned categories system-wide using UNSPSC
- ✓ Standardized bin locations and labeling across facilities

- ✓ Ongoing monitoring by inventory coordinators
- ✓ Continuous tracking of call-downs and stockouts
- ✓ Regular reviews with unit leadership

Stakeholders Involved



Analysis Process

1

Gather data

- Receipts
- Central Supply Issues
- Lead Times

2

Segment using ABCXYZ

- ABC – based on spend
- XYZ – based on demand variability (coefficient of variation)

3

Determine Service Levels

- A – 98%
- B – 95%
- C – 92%

4

Calculate Safety Stock + Cycle Stock

- SS = $Z\sqrt{\sigma^2 \times LT}$
- CS = Demand during Lead Time

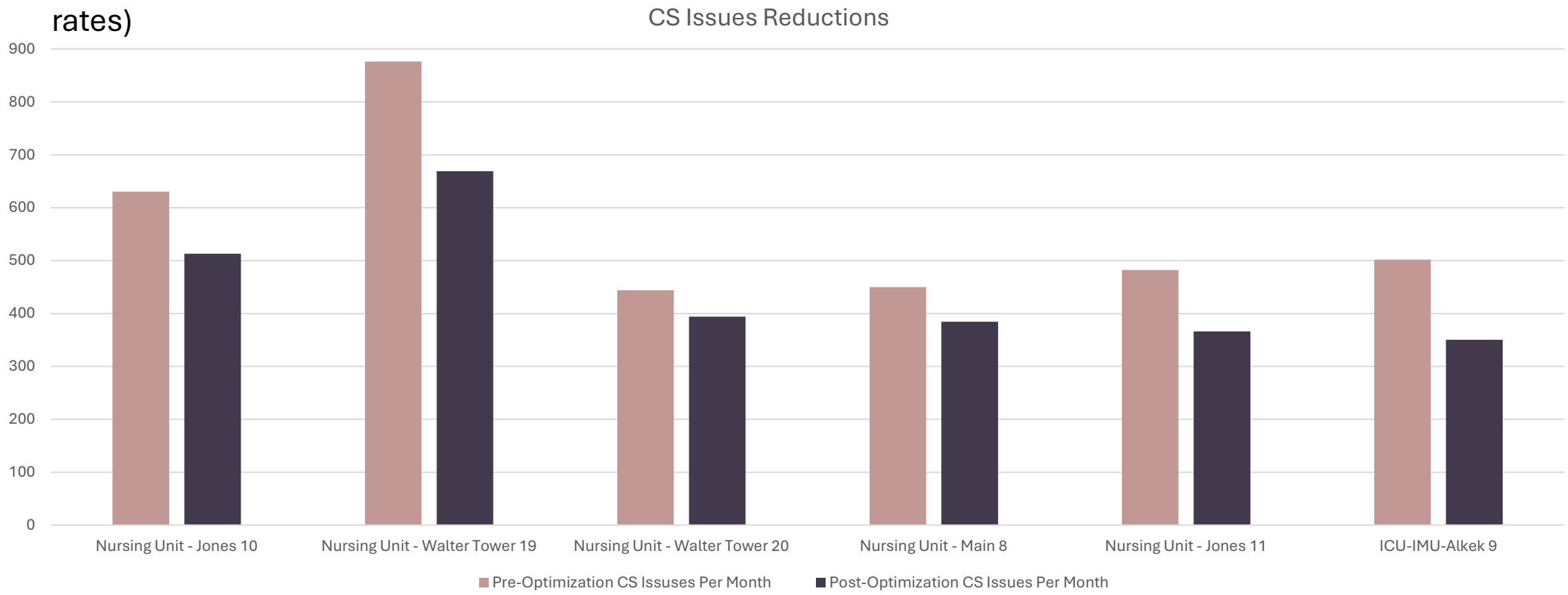
5

Review with Nursing Staff

- Determine if calculated min/max levels are appropriate for pars
- Determine if par removals are acceptable

Results

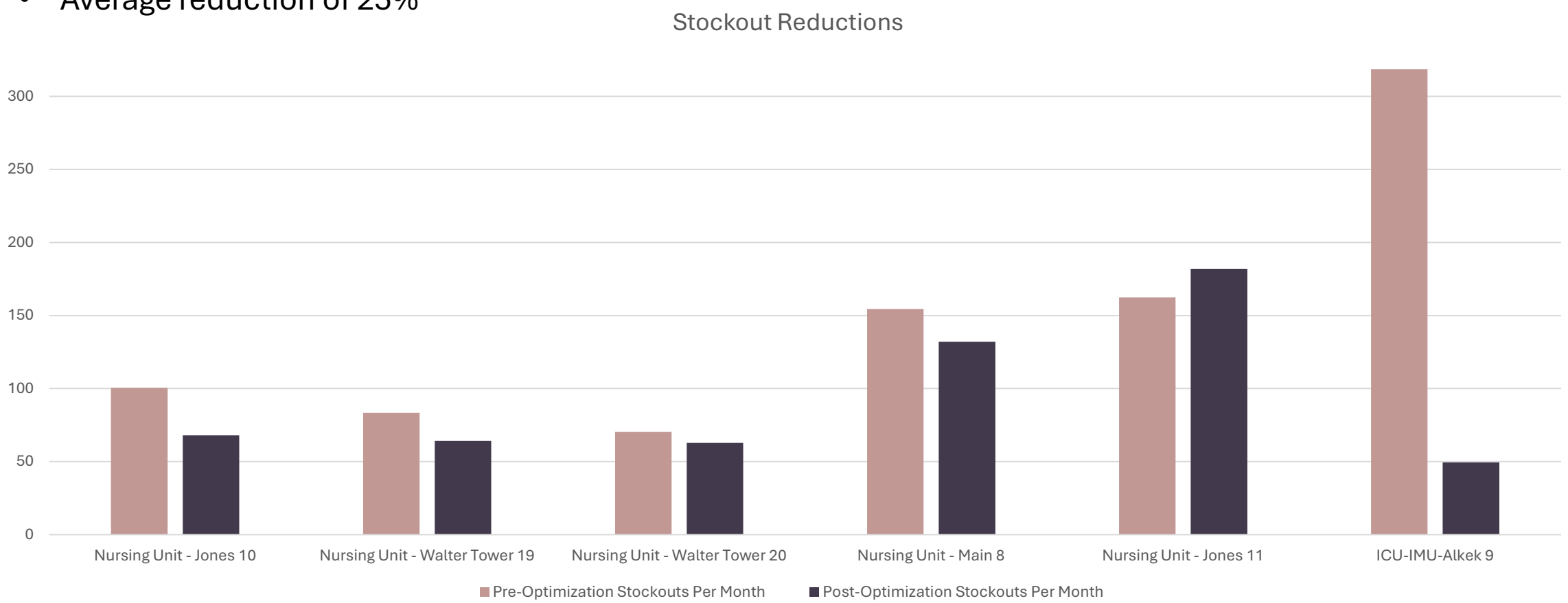
- Average reduction of 20%
- Resulted in approximately $215K labor cost avoidance annually (based on hourly labor rates)



Data sourced from Houston Methodist's ERP system

Results

- Average reduction of 25%



Data sourced from Houston Methodist's Par inventory management system

Houston Methodist Hospital Main 8 Par Optimization

Lessons Learned

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- Supply categories were structured using the United Nations Standards Products and Services Code (UNSPSC) codes to ensure consistency and alignment with best practices.
- Optimizing par levels using the ABCXYZ segmentation helps streamline inventory management by categorizing items based on their usage patterns and criticality.
- Reducing the time spent searching for supplies allowed clinicians to reallocate their efforts toward direct patient care.
- Usage of wire bins improved supply visibility and reduced dust collection
- Sustained collaboration between nursing and supply chain is crucial.

Key Takeaways

What Drove Our Supply Room Optimization Success

Define Scope & Strategy

Start by outlining the goals of your supply room optimization project. Use the 5S methodology (Sort, Set in Order, Shine, Standardize, Sustain) to guide your approach and align stakeholders on process improvement.

Co-Design with End Users for Buy-In and Usability

Involve nurses and clinical leaders early by proposing nurse-friendly categories and gathering real-time feedback. Clinician insights help structure supply rooms around actual workflows, accelerating adoption and satisfaction.

Focus on High-Impact Areas First

Use Central Supply call data to identify units with frequent supply issues. Start with the most disrupted areas to achieve quick wins and demonstrate the project's value.

Segment and Prioritize Inventory Using ABCXYZ Analysis

Use ABC segmentation (by spend) and XYZ segmentation (by demand variability) to guide stocking decisions. Prioritize high-spend, predictable-use items (AX), and minimize storage of low-use, variable items (CZ) to reduce waste and avoid stockouts.

Implement & Organize Supplies

Review recommended changes with unit leadership and make physical updates: resize bins, remove low-use items, add high-demand supplies, and install wire bins for better visibility and hygiene. Finalize layout by category.

Monitor and Sustain Results

Monitor changes made in the supply room. Ongoing ownership and regular reviews help sustain improvements across units.

Questions?

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